What is claimed is:

1. A dye-sensitized solar cell, comprising:

a semiconductor electrode;

a confronting electrode; and

electrolyte of 1,3-vinylalkylimidazolium iodide family being inserted between the semiconductor electrode and the confronting electrode.

2. The dye-sensitized solar cell as recited in claim 1, wherein, in the electrolyte, 1 to 30 mol% iodine (I^2) of the total weight of 1,3-vinylalkylimidazolium iodide is dissolved therein.

3. The dye-sensitized solar cell as recited in claim 1, wherein the semiconductor electrode is formed of dye molecular layer adsorbed to a conductive transparent glass substrate, a transitive metal oxide layer coating the conductive transparent glass substrate, and a transitive metal oxide layer.

4. The dye-sensitized solar cell as recited in claim 3, wherein the transitive metal oxide layer is nano-sized titanium dioxide and the dye molecular layer is ruthenium complex.